

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/052826

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 E21B43/12 E21B17/01

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 1 665 540 A (PACIFIC SOUTHWEST TRUST & SAVINGS BANK) 10 April 1928 (1928-04-10) column 1, lines 2-4,22,23; figure 1 column 2, lines 79-85,96-98	1,2,5-7, 12,13, 16,17
X	US 4 544 207 A (LITZ LAWRENCE M) 1 October 1985 (1985-10-01) column 1, lines 6-8; figure 1 column 3, lines 15-17 40-41 column 2, lines 55-59	12-18
A	EP 0 288 106 A (PUMPTECH NV ; SCHLUMBERGER CIE DOWELL (FR)) 26 October 1988 (1988-10-26) the whole document	1-18

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
10 February 2005	17/02/2005

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Georgescu, M

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/052826

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 734 111 A (MC CLINTOCK W) 22 May 1973 (1973-05-22) the whole document -----	1-18
A	US 4 974 452 A (HUNT ET AL) 4 December 1990 (1990-12-04) the whole document -----	1-18

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/052826

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 1665540	A	10-04-1928	NONE		
US 4544207	A	01-10-1985	AU	568593 B2	07-01-1988
			AU	1681783 A	17-01-1985
			CA	1196270 A1	05-11-1985
			ZA	8305110 A	28-03-1984
EP 0288106	A	26-10-1988	US	4797003 A	10-01-1989
			CA	1280107 C	12-02-1991
			DE	3886253 D1	27-01-1994
			DE	3886253 T2	07-04-1994
			EP	0288106 A2	26-10-1988
			NO	881726 A	24-10-1988
US 3734111	A	22-05-1973	NONE		
US 4974452	A	04-12-1990	GB	2186809 A	26-08-1987
			CA	1298486 C	07-04-1992
			DE	3763689 D1	23-08-1990
			EP	0234748 A1	02-09-1987
			NO	870692 A , B,	24-08-1987